

PATENT COOPERATION TREATY

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INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

REC'D 27 APR 2005

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Applicant's or agent's file reference TAB/P62186WO00	FOR FURTHER ACTION		See Form PCT/PEA/416
International application No. PCT/GB2004/000077	International filing date (day/month/year) 09.01.2004	Priority date (day/month/year) 10.01.2003	
International Patent Classification (IPC) or national classification and IPC B42D15/00			
Applicant DE LA RUE INTERNATIONAL LIMITED et al.			
<ol style="list-style-type: none"> 1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36. 2. This REPORT consists of a total of 6 sheets, including this cover sheet. 3. This report is also accompanied by ANNEXES, comprising: <ol style="list-style-type: none"> a. <input checked="" type="checkbox"/> sent to the applicant and to the International Bureau a total of 2 sheets, as follows: <ul style="list-style-type: none"> <input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions). <input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box. b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions). 			
<ol style="list-style-type: none"> 4. This report contains indications relating to the following items: <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Box No. I Basis of the opinion <input type="checkbox"/> Box No. II Priority <input checked="" type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability <input type="checkbox"/> Box No. IV Lack of unity of invention <input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement <input type="checkbox"/> Box No. VI Certain documents cited <input type="checkbox"/> Box No. VII Certain defects in the international application <input type="checkbox"/> Box No. VIII Certain observations on the international application 			
Date of submission of the demand 29.07.2004		Date of completion of this report 28.04.2005	
Name and mailing address of the international preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016		Authorized Officer Evans, A Telephone No. +31 70 340-3580	



INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
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Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This report is based on translations from the original language into the following language, which is the language of a translation furnished for the purposes of:
 - ☐ international search (under Rules 12.3 and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

Description, Pages

1-3, 5-17 as originally filed
4 received on 19.01.2005 with letter of 18.01.2005

Claims, Numbers

8-26 as originally filed
1-7 received on 19.01.2005 with letter of 18.01.2005

Drawings, Sheets

1/9-9/9 as originally filed

- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing
3. ☐ The amendments have resulted in the cancellation of:
 - ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to sequence listing (*specify*):
 4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
 - ☐ the description, pages
 - ☐ the claims, Nos.
 - ☐ the drawings, sheets/figs
 - ☐ the sequence listing (*specify*):
 - ☐ any table(s) related to sequence listing (*specify*):
- * If item 4 applies, some or all of these sheets may be marked "superseded."

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Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:
- ☐ the entire international application,
 - ☒ claims Nos. 26
- because:
- ☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (specify):
 - ☐ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. are so unclear that no meaningful opinion could be formed (*specify*):
 - ☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.
 - ☒ no international search report has been established for the said claims Nos. 26
 - ☐ the nucleotide and/or amino acid sequence listing does not comply with the standard provided for in Annex C of the Administrative Instructions in that:
 - the written form ☐ has not been furnished
 - ☐ does not comply with the standard
 - the computer readable form ☐ has not been furnished
 - ☐ does not comply with the standard
 - ☐ the tables related to the nucleotide and/or amino acid sequence listing, if in computer readable form only, do not comply with the technical requirements provided for in Annex C-*bis* of the Administrative Instructions.
 - ☒ See separate sheet for further details

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Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-25
	No: Claims	
Inventive step (IS)	Yes: Claims	1-25
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-25
	No: Claims	

2. Citations and explanations (Rule 70.7):

see separate sheet

Re Section III

Rule 6.2(a) PCT

Re Section V

Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1) The following document is referred to in this communication:

D1 : WO 92/11142 A

2) The document D1 is regarded as being the closest prior art to the subject-matter of claim 1 and shows (the references in parentheses applying to this document):

A security element (2) comprising an elongate strip of a light transmitting polymeric substrate, said substrate being provided with a magnetic feature and a metallic design, the metallic design being provided by a combination of metal and non-metallic regions (3,4) and comprising indicia, characters, patterns, designs, or geometrical shapes or a combination of the aforesaid design (5) comprising at least one repeating pattern of which one or more of the frequency, the instantaneous amplitude (5) and/or the maximum amplitude of the pattern varies along the length of the element, said pattern being positioned relative to the magnetic feature such that it does not overlap therewith. (cf. claim 1)

The subject-matter of claim 1 differs from this known security element in that:

The frequency, instantaneous amplitude and/or the maximum amplitude of the pattern varies **constantly** along the length of the element.

The subject-matter of claim 1 is therefore new (Article 33(2) PCT).

3) The problem to be solved by the present invention may be regarded as:

To improve the public security aspects of machine-readable security threads.

This problem is solved by having a repeating pattern of a combination of metallic and non-metallic regions which varies constantly along the length of the security thread.

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4) The solution to this problem proposed in claim 1 of the present application is considered as involving an inventive step (Article 33(3) PCT) for the following reasons:

No available document shows the claimed solution to this problem. Nothing appears to lead a person skilled in the art to the claimed solution.

5) The same reasoning applies for independent claim 22, which refers to a security document made from the security substrate containing the above security element.

6) Claims 2-21 and 23-25 are dependent on claim 1 and 22 resp. and as such also meet the requirements of the PCT with respect to novelty and inventive step.

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provided a security element comprising an elongate strip of a light transmitting polymeric substrate, said substrate being provided with a magnetic feature and a metallic design, the metallic design being
5 provided by a combination of metal and non-metallic regions which permit the transmission of light and comprising indicia, characters, patterns, designs, or geometrical shapes or a combination of the aforesaid design incorporating at least one repeating pattern of
10 which one or more of the frequency, the instantaneous amplitude and/or the maximum amplitude of the pattern varies constantly along the length of the element, said design being positioned relative to the magnetic feature such that it does not overlap therewith.

15 Key to the current invention is the recognition that the primary level of authentication in the majority of cases is by public inspection. Though the inventors recognise that machine inspection is
20 typically of paramount importance when authenticating a document, this may only occur a limited number of times during the life of a document. In some instances this may only be twice, just prior to issuance by a central bank and upon return to a
25 central bank. A far more regular occurrence is the need for the public to rapidly authenticate a document either with or without any additional aids. The inventors have recognised that in both EP-A-0516790 and EP-A-0961996 the visual aspects of the security
30 element have been compromised in order to accommodate the magnetic and machine-readable aspects. Examples in both patent specifications show the demetallised, public recognition, region constrained in order to allow for the magnetic features.

35 Within the current invention it is the visual

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CLAIMS:

1. A security element comprising an elongate strip of a light transmitting polymeric substrate, said substrate being
5 provided with a magnetic feature and a metallic design, the metallic design being provided by a combination of metal and non-metallic regions which permit the transmission of light and comprising indicia, characters, patterns, designs, or geometrical shapes or a combination of the aforesaid design
10 incorporating at least one repeating pattern of which one or more of the frequency, the instantaneous amplitude and/or the maximum amplitude of the pattern varies constantly along the length of the element, said design being positioned relative to the magnetic feature such that it does not
15 overlap therewith.
2. A security element as claimed in claim 1 in which the magnetic feature comprises a continuous layer.
- 20 3. A security element as claimed in claim 1 in which the magnetic feature comprises a discontinuous layer.
4. A security element as claimed in any one of the preceding claims in which the magnetic feature comprises
25 indicia, characters, patterns, designs, geometrical shapes or the like.
5. A security element as claimed in any one of the preceding claims in which the magnetic feature comprises a
30 machine readable bit pattern sequence.
6. A security element as claimed in any one of the preceding claims in which pattern is provided by demetallised regions in a metal layer.
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7. A security element as claimed in claim 6 in which the metal layer covers the magnetic feature.